

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

23 -05- 2005

Applicant's or agent's file reference

2032409PC/ko

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/FI2005/000032

International filing date (day/month/year)

18.01.2005

Priority date (day/month/year)

19.01.2004

International Patent Classification (IPC) or both national classification and IPC

H01H 9/00, H01H 19/60

Applicant

ABB Oy et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/SE

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WRITTEN OPINION OF THE
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International application No.

PCT/FI2005/000032

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language, _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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IAP11 Rec'd PCT/PTO 19 JUL 2006

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International application No.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>5-8</u>	YES
	Claims	<u>1-4, 9</u>	NO
Inventive step (IS)	Claims	<u></u>	YES
	Claims	<u>1-9</u>	NO
Industrial applicability (IA)	Claims	<u>1-9</u>	YES
	Claims	<u></u>	NO

2. Citations and explanations:

The object of the present invention resides in providing a modular switching device that avoids having several types of main shafts.

The solution of the object is based on a modular switching device comprising a shaft element that is coupled directly to a shaft element of an adjacent module without a separate connecting element.

The following documents are cited in the International search Report:

- D1) US 6259338 B1
- D2) WO 03050830 A1
- D3) US 5777283 A
- D4) WO 03009324 A1

Document D1 shows a multiple pole switch for power switching. The switch has a switch chamber housing containing several adjacent switch chambers corresponding to the number of poles. There is a common switch shaft (9). Each chamber has interacting fixed and pivotable contact arrangements. Each pivotable contact bridge is mounted in an insulating shaft segment (10-12). Adjacent shaft segments are coupled via separate coupling elements (14, 15).

Document D2 shows a rotating contact support shaft for low voltage circuit breaker. The shaft has a modular structure with modules (10, 20) coupled to moving contacts, with

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

connections enabling simultaneous movement of both support modules and the interconnection module (30) as the shaft rotates. There is a male-female coupling between the first and third and the second and fourth connections.

Documents D1 and D2 show a modular switching device comprising a plurality of interconnected modules where said modules comprise a control device module and a pole cell module. Said modules of the switching device being interconnected with a shaft adapted to transfer a torque required for operating the switching device from one module to another module. Each module comprises a shaft element, and said shaft element transferring the torque is composed of directly interconnected shaft elements to connecting members of adjacent modules. Consequently, the subject matter of claims 1-4 and 9 is previously known and therefore lacks novelty.

Furthermore, some of the further features added in claims 5-8 are not explicit in D1 or D2, but it does not seem that any surprising technical effect is obtained by these additions. If it can be shown that some aspect covered by these claims provides unexpected effects and the claims are restricted accordingly, the judgement may be reconsidered. Until these conditions are met, claims 5-8 are not considered to involve an inventive step.

Documents D3 and D4 show only the general state of the art.

The invention is industrially applicable.

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